UNITED STATES PATENT AND TRADEMARK OFFICE

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10/595,165	02/12/2007	Marcus Davidsson	P18112-US2	3743

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EXAMINER
WOO, ANDREW M

ART UNIT	PAPER NUMBER
2441	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/595,165	DAVIDSSON, MARCUS
Office Action Summary	Examiner	Art Unit	
	ANDREW WOO	2441	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>15 June 2010</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,3-9,17 and 19-21</u> is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1,3-9,17 and 19-21</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a) ☐ All   b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date <u>06/30/2010</u>.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   The application has been examined. Claims 1, 3-17, and 19-21are pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   **Claims 1, 3-17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutta et al. (WO 01/91382, hereinafter Hutta) in view of Bjelland et al. (2003/0153309, hereinafter Bjelland).**

5.   Regarding claim 1, **Hutta** discloses a method in a communication apparatus for maintaining an established connection between said communication apparatus and a network node of a serving communication network *(**Hutta** discloses that the selection of the support node may be made depending on the type of the connection established and/or requested, or on the type of the user equipment)* **(Hutta, page 10, lines 25-29)**, comprising the steps of:

receiving an acceptance message from said network node in response to a request message relating to a first procedure transmitted to said network node *(**Hutta** discloses that the first network element may send a message of request containing the identifier (e.g. RAI) to another network element such as a DNS (Domain Name System) server in order to receive, as a response, a list of possible second network elements serving the routing area indicated by the RAI)* **(Hutta, page 5, lines 6-11)**;

determining whether any request relating to a second procedure is pending *(**Hutta** discloses that the follow on request shall be set by the MS if there is pending uplink traffic (signaling or user data))* **(Hutta, page 26, lines 17-18)**; and,

transmitting to said network node, if any request is pending when said acceptance message is received, a maintaining request for maintaining said connection *(**Hutta** discloses that the first network element uses the area identifier and/or the CN identifier to request the list-transmitting network element such as a DNS server to send*

a list of second network elements assigned to the transmitted identifier) **(Hutta, page 6, lines 25-36; page 7, lines 1-5)**.

Hutta does not explicitly disclose wherein the step of transmitting said maintaining request is executed if the pending request is received after the request relating to the first procedure is transmitted and before said acceptance message is received.

In analogous art, **Bjelland** teaches wherein the step of transmitting said maintaining request is executed if the pending request is received after the request relating to the first procedure is transmitted and before said acceptance message is received *(**Bjelland** discloses that the MS sets the follow-on request, and the follow-on request indication to release or keep the connection after the completion of the procedure)* **(Bjelland, para. 54)**.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of **Bjelland** related to maintaining a connection when there are transactions pending and to combine with **Hutta** in order to increase the efficiency within the system *(**Bjelland** discloses that the follow-on request indication to release or keep the connection after the completion of the procedure)* **(Bjelland, para. 54)**.

6.   Regarding claim 3, **Hutta** and **Bjelland** discloses the method according to claim 1, wherein the maintaining request is incorporated into a response message, which is transmitted in response to receiving said acceptance message *(**Hutta** discloses that the*

first network element may send a message of request containing the identifier (e.g. RAI)

to another network element such as a DNS (Domain Name System) server in order to

receive, as a response, a list of possible second network elements serving the routing

area indicated by the RAI; and as a part of the response of the DNS, there is a

transmitted a list of IP addresses and Canonical names (CNAME), as in fig. 5) **(Hutta,**

page 5, lines 6-11; page 19, lines 1-5).

7.   Regarding claim 4, **Hutta** and **Bjelland** discloses the method according to claim

3, wherein the response message is an acknowledgement message *(Hutta discloses*

that the RA update is an Inter-SGSN routing area update, the new SGSN sends an

SGSN Context Acknowledge message to the old SGSN) **(Hutta, page 28, lines 4-9)**.

8.   Regarding claim 5, **Hutta** and **Bjelland** discloses the method according to claim

1, further comprising the step of maintaining said established connection until the

connection is no longer in use *(Hutta discloses that the routing area has to be*

completely shut-down and is at least temporarily no longer usable for providing

connections) **(Hutta, page 2, lines 20-26)**.

9.   Regarding claim 6, **Hutta** and **Bjelland** discloses the method according to claim

1, wherein the established connection is a packet switched or a circuit switched

signaling connection *(Hutta discloses that the network can be of circuit-switched or*

packet-switched) **(Hutta, page 1, lines 3-10)**.

10.   Regarding claim 7, **Hutta** and **Bjelland** discloses the method according to claim 1, wherein the method is comprised in a mobility management protocol of a wireless communication interface of the electronic communication apparatus, and wherein a mobility management unit handles the signaling to the network node *(Hutta discloses that to ensure backward compatibility, the new information element is optional information element transmitted in both MM and RRC signaling (if an explicit information element is used for both protocols))* **(Hutta, page 16, lines 20-32)**.

11.   Regarding claim 8, **Hutta** and **Bjelland** discloses the method according to claim 1, wherein the first and second procedures are mobility management procedures *(Hutta discloses that the selection of one of the available second network elements covering a certain routing area may be performed in dependence on information coming from other network element such as user equipment, for instance a mobile station)* **(Hutta, page 7, lines 26-36; page 8, lines 1-5)**.

12.   Regarding claim 9, **Hutta** and **Bjelland** discloses the method according to claim 1, wherein the maintaining request is a Follow-On Request (FOR) *(Hutta discloses that the RRC connection is established, if not done already; the MS sends a routing area update request message (i.e. follow-on-request, etc.); and the follow on request shall be set by the MS if there is pending uplink traffic (signaling or user data))* **(Hutta, page 26, lines 12-20)**.

13.   Regarding claim 10, **Hutta** discloses a method in a communication network node

for maintaining a signal connection between said network node and a communication

apparatus being served *(Hutta discloses that the selection of the support node may be*

made depending on the type of the connection established and/or requested, or on the

type of the user equipment) **(Hutta, page 10, lines 25-29)**, comprising the steps of:

        establishing said signal connection *(Hutta discloses that the connection can be*

established to a node; the selection of the support node may be made depending on the

type of the connection established and/or requested, or on the type of the user

equipment) **(Hutta, page 7, lines 26-36; page 8, lines 1-5; page 10, lines 25-29)**;

        transmitting to said communication apparatus an acceptance message in

response to receiving from said communication apparatus a request relating to a first

procedures *(Hutta discloses that the first network element may send a message of*

request containing the identifier (e.g. RAI) to another network element such as a DNS

(Domain Name System) server in order to receive, as a response, a list of possible

second network elements serving the routing area indicated by the RAI; and the first

network element uses the area identifier and/or the CN identifier to request the list-

transmitting network element such as a DNS server to send a list of second network

elements assigned to the transmitted identifier) **(Hutta, page 5, lines 6-11; page 6,**

lines 25-36; page 7, lines 1-5);

        maintaining the signal connection for a predetermined period of time after the

acceptance message is transmitted *(Hutta discloses that when a SGSN is scheduled*

for operation and maintenance procedures, it will preferably by excluded from the list sent back in response a certain or determined time interval such as several hours before the scheduled maintenance time point so as to avoid connections to be newly established to this SGSN) **(Hutta, page 23, lines 19-34)**; and,

further maintaining the connection if a maintaining request is received from said communication apparatus within said predetermined period of time *(**Hutta** discloses that when a SGSN is scheduled for operation and maintenance procedures, it will preferably by excluded from the list sent back in response a certain or determined time interval such as several hours before the scheduled maintenance time point so as to avoid connections to be newly established to this SGSN)* **(Hutta, page 23, lines 19-34)**.

Hutta does not explicitly disclose maintaining request associated with a second procedure initiated after said request relating to said first procedure was transmitted.

In analogous art, **Bjelland** teaches maintaining request associated with a second procedure initiated after said request relating to said first procedure was transmitted *(**Bjelland** discloses that the follow-on request indication to release or keep the connection after the completion of the procedure)* **(Bjelland, para. 54)**.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of **Bjelland** related to maintaining a connection when there are transactions pending and to combine with **Hutta** in order to increase the efficiency within the system *(**Bjelland** discloses that the follow-on request indication to release or keep the connection after the completion of the procedure)* **(Bjelland, para. 54)**.

14.   Regarding claim 11, **Hutta** and **Bjelland** discloses the method according to claim

10, further comprising the steps of:

receiving the maintaining request, and in response thereto maintaining the

established connection until the connection is no longer in use *(Hutta discloses that the*

routing area has to be completely shut-down and is at least temporarily no longer

usable for providing connections) **(Hutta, page 2, lines 20-26)**.

15.   Regarding claim 12, **Hutta** and **Bjelland** discloses the method according to claim

10, wherein the acceptance message comprises information requiring an

acknowledgement message, the method further comprises the step of receiving the

acknowledgement message, and determining whether said acknowledgement message

comprises the maintaining request *(Hutta discloses that the first network element may*

send a message of request containing the identifier (e.g. RAI) to another network

element such as a DNS (Domain Name System) server in order to receive, as a

response, a list of possible second network elements serving the routing area indicated

by the RAI; and as a part of the response of the DNS, there is a transmitted a list of IP

addresses and Canonical names (CNAME), as in fig. 5; and the RA update is an Inter-

SGSN routing area update, the new SGSN sends an SGSN Context Acknowledge

message to the old SGSN) **(Hutta, page 5, lines 6-11; page 19, lines; page 28, lines**

4-9).

16.   Regarding claim 13, **Hutta** and **Bjelland** discloses the method according to claim 10, wherein the established connection is a packet switched or a circuit switched signaling connection *(Hutta discloses that the network can be of circuit-switched or packet-switched)* **(Hutta, page 1, lines 3-10).**

17.   Regarding claim 14, **Hutta** and **Bjelland** discloses the method according to claim 10, wherein the method is comprised in a mobility management protocol of a wireless interface of the communication network, and wherein a mobility management unit handles the signaling to the communication apparatus *(Hutta discloses that to ensure backward compatibility, the new information element is optional information element transmitted in both MM and RRC signaling (if an explicit information element is used for both protocols))* **(Hutta, page 16, lines 20-32).**

18.   Regarding claim 15, **Hutta** and **Bjelland** discloses the method according to claim 10, wherein the specific procedure is a mobility management procedure *(Hutta discloses that the selection of one of the available second network elements covering a certain routing area may be performed in dependence on information coming from other network element such as user equipment, for instance a mobile station)* **(Hutta, page 7, lines 26-36; page 8, lines 1-5)**.

19.   Regarding claim 16, **Hutta** and **Bjelland** discloses the method according to claim 10, wherein the maintaining request is a Follow-On Request (FOR) *(Hutta discloses*

that the RRC connection is established, if not done already; the MS sends a routing

area update request message (i.e. follow-on-request, etc.); and the follow on request

shall be set by the MS if there is pending uplink traffic (signaling or user data)) **(Hutta,**

page 26, lines 12-20).

20.   Regarding claim 17, **Hutta** discloses a control device for a communication

apparatus for maintaining an established connection to a communication network, the

control device being adapted to issue a request to maintain said connection *(Hutta*

discloses that the network element can be of a user equipment) **(Hutta, page 4, lines**

18-28), comprising:

receiver means arranged to receive an acceptance message in response to

transmitting a request relating to a first procedure *(Hutta discloses that the first network*

element may send a message of request containing the identifier (e.g. RAI) to another

network element such as a DNS (Domain Name System) server in order to receive, as

a response, a list of possible second network elements serving the routing area

indicated by the RAI) **(Hutta, page 5, lines 6-11)**; and,

issuing means arranged to issue, if any request relating to a second procedure is

pending when said acceptance message is received, a maintaining request for

maintaining said connection *(Hutta discloses that the first network element uses the*

area identifier and/or the CN identifier to request the list-transmitting network element

such as a DNS server to send a list of second network elements assigned to the

transmitted identifier; and the follow on request shall be set by the MS if there is

pending uplink traffic (signaling or user data)) **(Hutta, page 6, lines 25-36; page 7,**

lines 1-5; page 26, lines 17-18).

Hutta does not explicitly disclose wherein said issuing means is arranged to

issue said maintaining request if the pending request is received after the request

relating to the first procedure is transmitted and before said acceptance message is

received.

In analogous art, **Bjelland** teaches wherein said issuing means is arranged to

issue said maintaining request if the pending request is received after the request

relating to the first procedure is transmitted and before said acceptance message is

received *(Bjelland discloses that the follow-on request indication to release or keep the*

connection after the completion of the procedure) **(Bjelland, para. 54)**.

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to take the teachings of **Bjelland** related to maintaining a connection

when there are transactions pending and to combine with **Hutta** in order to increase the

efficiency within the system *(Bjelland discloses that the follow-on request indication to*

release or keep the connection after the completion of the procedure) **(Bjelland, para.**

54).

21.   Regarding claim 19, **Hutta** and **Bjelland** discloses the control device according

to claim 17, wherein said issuing means is arranged to incorporate the maintaining

request into a response message, and arranged to issue said response message in

response to receiving said acceptance message *(Hutta discloses that the first network*

element may send a message of request containing the identifier (e.g. RAI) to another

network element such as a DNS (Domain Name System) server in order to receive, as

a response, a list of possible second network elements serving the routing area

indicated by the RAI; and as a part of the response of the DNS, there is a transmitted a

list of IP addresses and Canonical names (CNAME), as in fig. 5) **(Hutta, page 5, lines**

6-11; page 19, lines 1-5).

22.   Regarding claim 20, **Hutta** and **Bjelland** discloses the control device according

to claim 19, wherein the response message is an acknowledgement message *(Hutta*

discloses that the RA update is an Inter-SGSN routing area update, the new SGSN

sends an SGSN Context Acknowledge message to the old SGSN) **(Hutta, page 28,**

lines 4-9).

23.   Regarding claim 21, **Hutta** and **Bjelland** discloses the control device according

to claim 17, comprising a memory for storing a mobility management protocol of a

wireless communication interface, according to which the requests are transmitted, and

the acceptance message is received *(Hutta discloses that to ensure backward*

compatibility, the new information element is optional information element transmitted in

both MM and RRC signaling (if an explicit information element is used for both

protocols); and having retrieved the available SGSNs from the memory) **(Hutta, page**

16, lines 20-32; page 23, lines 19-34).

Response to Arguments

24.   Applicant's arguments with respect to claims 1, 3-17, and 19-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

25.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW WOO whose telephone number is (571)270-7521. The examiner can normally be reached on Monday - Friday, 8am-5:30pm, alternating Fridays off.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571)272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. W./
Examiner, Art Unit 2441
08/26/2010

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2441